

REMARKS

This is submitted in Response to the outstanding Office Action dated August 20, 2009. The Office Action has been reviewed, and reconsideration of the application and allowance thereof are requested based on the following remarks.

Claims 1-9 and 11-24 stand rejected under 35 USC §103 as being unpatentable over Hayes, U.S. Patent No. 4 807 647.

Claim 1 is directed to a tobacco smoke filter having a tar retention of at most 50%, comprising a relatively high draw resistance downstream filtering plug of at most 50% tar retention, a relatively low draw resistance upstream filtering plug of at most 22% tar retention spaced longitudinally upstream from the downstream filtering plug, and a filter wrapper engaging around and joining the spaced plugs to define a cavity therebetween, the draw resistance of the downstream filtering plug being greater than the draw resistance of the upstream filtering plug. (emphasis added)

The filter defined in Claim 1 achieves improved performance over conventional filters because it gives satisfactory taste and the draw performance, while providing desirably low CO delivery (less than 5 mg per cigarette, compared with 6 mg per cigarette of conventional filters) and low CO/tar delivery ratio (less than 0.7 compared with 1 for conventional filters).

Hayes teaches a cigarette filter including an upstream first core component 2, a downstream second core component 4, and a common air-permeable plugwrap 6. In the Office Action, on page 3, the Examiner states that Hayes teaches a "high draw resistance (downstream) filter" and a "low draw resistance (upstream) filter". However, Hayes teaches the opposite of what the Examiner states above. As described in column 1, lines 5-16, Hayes states that the filter comprises longitudinally aligned core components, a "first" of which is air-permeable and of a relatively high pressure drop, and a "second" of which is air-permeable and of a relatively low pressure drop. The high pressure drop core component is

described as being located towards the tobacco rod 8 in column 1, lines 39-43. Thus, the first core component 2 in Hayes is the "upstream" component and corresponds to the "upstream filtering plug" in Claim 1, and the second core component 4 corresponds to the "downstream filtering plug" in Claim 1.

Further, Hayes teaches in column 2, lines 36-42 that the first core component 2 has an enclosed pressure drop of over 50 mm water gauge (Wg) and the second core component 4 has an enclosed pressure drop of less than 50 mm Wg (see also Table 2 in Hayes). Thus, Hayes teaches that the downstream (second) core component 4 has a lower draw resistance than the upstream (first) core component, which is the opposite of Claim 1 which recites "the draw resistance of the downstream filtering plug being greater than the draw resistance of the upstream filtering plug."

Still further, Hayes specifically states the desirability of this particular arrangement in column 2, line 62, through column 3, line 24. Specifically, the filter in Hayes is stated to achieve a high degree of air-dilution to give good reduction of CO without reducing taste and pressure drop of the filter cigarette to unacceptably low levels. Hayes also states that various prior filter structures have aimed at such performance, but "the filter of the present invention can achieve it to an improved degree by use of a very high pressure drop, low retention upstream core component in combination with a low pressure drop, low retention downstream core component...". (emphasis added) Thus, Hayes is believed to teach away from providing an upstream (tobacco side) filtering plug having a low draw resistance or low pressure drop.

In view of the above, Claim 1 is believed to be patentably distinguishable over Hayes.

Independent Claims 17 and 18 are directed to a filter cigarette and a multiple length filter rod, respectively, and recite the features of the filter in Claim 1. Therefore,

Claims 17 and 18 are also believed to be allowable over Hayes for the same reasons as presented above relative to Claim 1.

Claims 2-9, 11-16 and 19-24 depend upon what are believed to be allowable Claims 1, 17 or 18, and as such, are believed allowable therewith. These claims also include additional features which further distinguish over Hayes. For example, Claim 3 recites that the draw resistance of the downstream filtering plug is from 60 to 110 mm.Wg. In contrast, the second downstream core component 4 in Hayes has a draw resistance less than 50 mm Wg.

Further Claim 5 recites, "the upstream filtering plug has a draw resistance of up to 20 mm.WG" (emphasis added), and Claim 6 recites, "the upstream filtering plug has a draw resistance of to 8 to 16 mm.WG." On the other hand, Hayes discloses in column 2, lines 38-41 that the upstream first core component has an enclosed pressure drop of over 50 mm Wg. Hayes also discloses in Table 2 that the pressure drop of the upstream first core component is 85 mm Wg or 164 mm Wg.

Claim 4 recites, "the downstream filtering plug has a tar retention of from 35 to 45%", Claim 19 recites, "the downstream filtering plug has a tar retention of about 40%", Claim 21 recites, "the downstream filtering plug has a tar retention of about 40%", and Claims 23 and 24 recite, "the downstream filtering plug has a tar retention from 35% to 45%." Hayes teaches in column 2, lines 49-61 that the downstream second core component has an enclosed tar retention of less than 30% (see also Table 2).

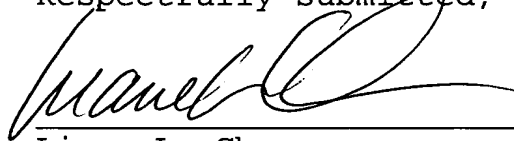
Claim 22 recites, "the tar retention of the upstream filtering plug is less than the tar retention of the downstream filtering plug." On the contrary, as shown in Table 2 of Hayes, the tar retention of the downstream second core component 4 is larger than the tar retention of the upstream first core component 2.

Claims 15 and 18 stand rejected under 35 USC §103, as being unpatentable over Hayes '647 in view of Banerjee, U.S. Patent No. 5 839 449. Claim 15 depends upon what is believed

to be an allowable Claim 17, and as such, is believed allowable therewith. Also, Claim 18 is directed to a multiple length filter rod comprising a filter including the features of the filter recited in Claim 1. Since Banerjee does not cure the deficiencies of Hayes as discussed above relative to Claim 1, Claim 18 is believed allowable for similar reasons as presented above relative to Claim 1.

For the above reasons reconsideration of the application and allowance thereof are respectfully requested. Further and favorable reconsideration is respectfully requested.

Respectfully submitted,



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